**JC2 Preliminary Examinations 2018**
**H2 Economics Paper 2 – Essay**

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**4 Many economists argue that managing rising price pressures is the single most important macroeconomic objective for governments.**

**(a) Explain possible causes of rising price pressures of goods and services in an open economy. [10]**

**(b) Discuss the extent to which a government's policy decisions to manage rising price pressures are affected by the degree in which its economy is open. [15]**

**Part (a): Explain possible causes of rising price pressures of goods and services in an open economy. [10]**

**Question Dissection**

| | |
|---|---|
| **Command Word** | Explain |
| **Question Type** | Explanation |
| **Concept(s)** | • Meaning of an open economy<br>• Causes of inflation in an open economy<br>o Cost-push inflation<br>o Demand-pull inflation |
| **End Point** | To explain at least 2 causes of inflation specifically in the context of an open economy. |
| **Context** | Any country, though reference can be made to Singapore's context |

**Suggested Answers**

**(I) Introduction**

An open economy refers to an economy that interacts freely with other economies around the world. Economic openness can be measured as openness and reliance of an economy to trade, foreign investment, labour and capital flows. Singapore is one such open economy where its external demand constitutes a large percentage (about 300%) of its GDP and FDI is about 70 % of its total investments. Due to the constraints of a small population size with a lack of natural resources, the Singapore economy has to be open which means that it is heavily reliant on exports and FDI to drive its economic growth.

When an economy is faced with rising price pressures on good and services, it suggests that the economy is facing an Inflationary situation. Inflation is defined as a sustained rise in the general price level of a given basket of goods and services in an economy over time, usually a year. Hence rising price pressures (or inflation) can be caused by a persistent rise in aggregate demand (AD) or due to a persistent fall in aggregate supply (AS).

Being open means that the main types of rising price pressures of goods and services is often that of import-price-push inflation and external demand-led demand pull inflation.

## (II) Body

### (1) Cost-push Inflation

Being open makes an economy most vulnerable to external supply shocks such as increase in the price of imported oil and other raw materials caused by strong demand from China and other emerging economies , higher prices of imported food due to bad weather, and higher foreign inflation. Singapore's lack of natural resources implies a heavy reliance on imported raw materials and necessities for both the production of goods and services, as well as for consumption respectively. As such open economies such as Singapore are extremely susceptible to rising prices pf imported goods and services. An example is how Singapore's inflation rate rose to 6.6% in 2008, three times the inflation rate in 2007. This was because of rising food prices in our neighbouring countries, coupled with sharp increases in global oil prices that year.

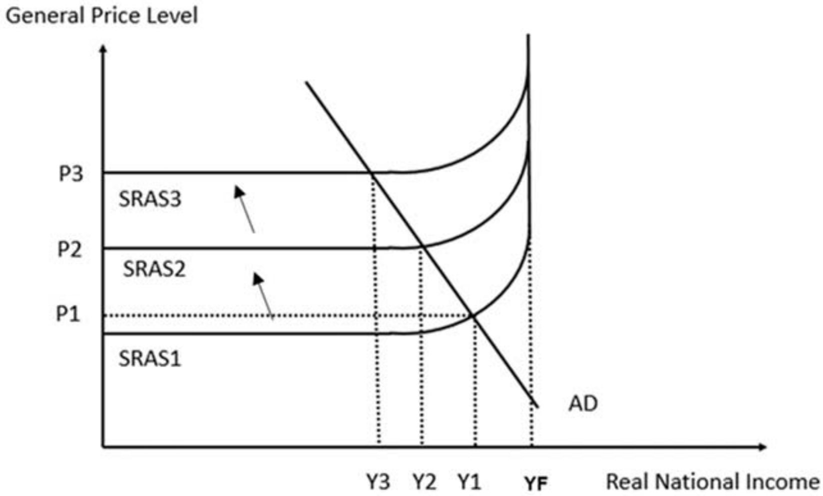


**Figure 1: Cost-push inflation (from imported inflation)**

As a result of higher cost of production due to higher import prices, ceteris paribus, profits fall and producers cut back on production, causing the the $SRAS_1$ curve to shift upwards (i.e. to the left) to $SRAS_{2.}$, This results in shortages and causes an upward pressure on prices thereby resulting in a higher general price level, $P_2$ and a lower equilibrium national output at $Y_2$. If there are further increases in costs of production, and firms pass on the higher costs to consumers in the form of higher prices, SRAS will then fall further from $SRAS_2$ to $SRAS_3$, causing the general price level to rise to $P_3$ and the level of national output to fall to $Y_3$.

Hence, with higher prices of imported final products as well as through higher cost of imported inputs which raise cost of production, this will cause rising domestic price pressures of goods and services in an open economy such as Singapore.

### (2) Demand-pull Inflation

Being open, an economy is also very prone to demand pull inflation, especially when there is strong growth of its trading partners. For an open economy like Singapore, strong growth of its trading partners such as China means there is a rise in real national income of such countries. This rise in foreign purchasing power from these countries will cause a more than proportionate increase in the demand for Singapore's exports, since Singapore exports mainly goods whose demand is income elastic for instance electronics and high-end pharmaceutical products. This leads to a rise in Singapore's total export revenue. Assuming total expenditure on imports remaining constant, there is a rise in (X-M).

Strong growth of its trading partners also boost both firms' profitability as well as business confidence. Assuming that these foreign firms are equally confident in an open economy such as Singapore, a rise in their expected profitability will increase their Marginal Efficiency of Investment (MEI), thereby making them invest in Singapore. In other words, foreign direct investment (FDI) in Singapore rises.

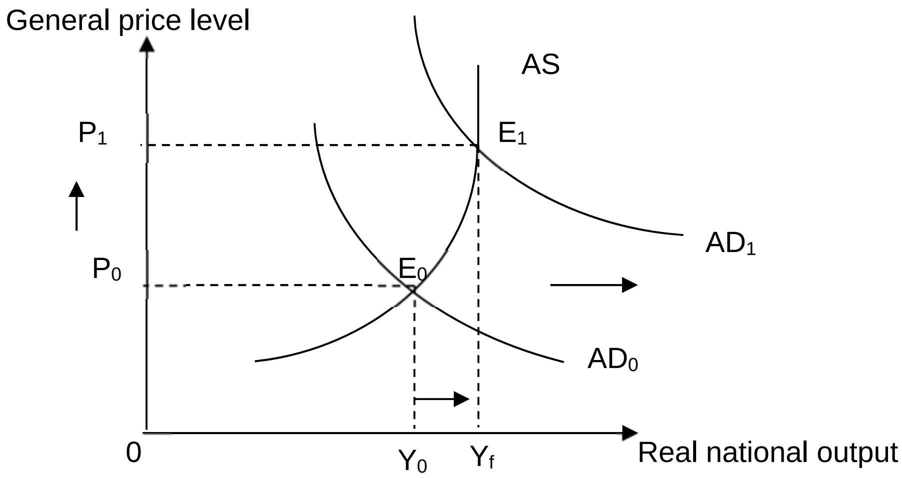


**Figure 2: Demand-Pull Inflation**

Ceteris paribus, AD increases sharply due to an increase in FDI and net exports which is a large component of AD. This is shown by a rightward shift of AD curve from $AD_0$ to $AD_1$. Assuming the country is operating near full employment, there will be a shortage of final goods and services which exerts upward pressure on GPL. GPL continues to rise until shortage is eliminated. The persistent increase in the general price level services from $P_0$ to $P_1$ depicts demand-pull inflation.

Hence, in an open economy, external factors such as strong growth and thus rising affluence of its trading partners would be one of the main causes of demand-pull inflation, hence accounting for the significant impact on rising price pressures of goods and services.

## (III) Conclusion

A very open economy like Singapore which is resource-scarce and import-reliant given her small domestic market, external factors such as imported inflation (cost-push inflation) and rising affluence of its trading partner (demand-pull inflation) would be the main causes of inflation in the domestic economy. Moreover, both demand-pull and cost-push inflation can reinforce each other to bring about a greater rise in price pressures of goods and services in an open economy.

| Level | Knowledge, Application / Understanding and Analysis | Marks |
|---|---|---|
| L 3 | For an answer that gives a detailed and analytic explanation using AD-AS model on the causes of rising price pressures of goods and services in an open economy<br><br>Well-elaborated analysis would include the use of AD-AS model to explain the demand-pull and cost-push inflation and relevant examples of an open economy.  is required, with clear reference made to the diagrams. | 8 – 10 |
| L 2 | For an answer that gives a descriptive explanation on the causes of rising price pressures of goods and services in an open economy<br><br>Some gaps are evident in some of the analysis and explanation may only focus on one cause of inflation (max 5 marks) | 5 – 7 |
| L 1 | For an answer that shows some basic knowledge of the possible causes of rising price pressures of goods and services in an open economy<br><br>Limited application of economic analysis | 1 – 4 |

**Part (b): Discuss the extent to which a government's policy decisions to manage rising price pressures are affected by the degree in which its economy is open. [15]**

**Question Dissection**

| | |
|---|---|
| **Command Word** | Discuss |
| **Question Type** | Explain, elaborate and give a reasoned opinion, of which an evaluative conclusion is expected |
| **Concept(s)** | • Meaning of an open economy<br>• Sources of Inflation<br>• Policies to tackle sources of inflation |
| **End Point** | To consider various factors (including openness of an economy) and its relative importance in influencing the choice of policy decision to manage rising price pressures is based<br>• Thesis: Openness of economy can influence the choice of policy decision<br>• Anti-thesis: Other factors besides openness of economy |
| **Context** | Any country, though reference can be made to the Singapore's context, where applicable. |

**Suggested Answers**

**(I) Introduction**

Implementing policies to manage rising price pressures in order to attain a low and stable inflation is especially essential for an open economy. This is because low and stable inflation could promote business investment, employment, and sustained economic growth. Besides increasing the export competitiveness which is a crucial avenue to generate income and employment for the economy, an environment of low and stable inflation attracts FDI. Hence price stability is a pre-requisite before exports demand and FDI can serve as growth engines for an open economy.

To manage rising price pressures, the degree in which an economy is open does influence a government's choice of policies, although there are also other factors that policy makers must consider when deciding on policy choice.

## (II) Body

**Thesis: Openness does influence a government's choice of policies to manage rising prices.**

### (1) Use of Exchange Rate Policy to tackle Root Causes of rising price pressures in an open economy

As explained earlier, being open makes an economy susceptible to both cost-push inflation (caused by rising import prices) and demand-pull inflation (caused by excessive increase in export demand by foreigners) from external causes. To tackle such cost-push inflation, open economies like Singapore use monetary policy (MP) centred on exchange rates. By adopting a slow and gradual appreciation of the Singapore dollar (SGD), this lowers the prices of imported final goods & services in domestic currency. This fall in price of imported final good and services has a direct effect in bringing import price-push inflation rate down. In addition, as such economies are heavily reliant on imports for raw materials, the stronger SGD Singapore dollar also lowers the prices of imported inputs and raw materials in domestic currency, which will in turn lower firms' cost of production. Ceteris paribus, this increases profits and assuming firms pass on the cost savings to consumers, firms increase production, leading to a rightward shift of the AS curve and hence lowering the equilibrium general price level in the economy. This corrects the cost-push inflation that is caused by import price-push inflation.

To tackle demand-pull inflation caused by excessive growth of AD, an appreciation of the exchange rate would cause export (X) prices in foreign currency to rise, leading to a fall in the quantity demanded of exports. At the same time, import (M) prices will fall in domestic currency, leading to a rise in quantity demanded of imports. Assuming that the sum of price elasticity of demand for the country's exports and imports is greater than one or that the Marshall-Lerner condition is met, the currency appreciation will lead to a fall in Singapore's net exports. This will reduce AD and cause a fall in the equilibrium general price level, hence reducing demand-pull inflation caused by large increase in demand for exports in a situation where the economy is near full employment.

Hence 'openness' of an economy would play a significant role in influencing government's choice of policy to manage rising price pressures. For countries like Singapore (extremely open) where exports revenue and imports expenditure is more than 300% of its GDP, using monetary policy centred on exchange rates to attain price stability is more strategic in effectively targeting the root causes of rising price pressures in an open economy.

### (2) Being open to capital flow may limit effectiveness of the use of interest-rate centred MP

An open economy also suggests being open to capital flow from FDI which increases AD. As such, contractionary monetary policy centred on interest rates can also be used to reduce AD and curb demand-pull inflation. The government reduces the money supply to bring down the rate of inflation. When money supply falls, interest rates will increase, leading to an increase in the cost of borrowing. This will discourage investment and consumption expenditures due to the higher cost of borrowing. Thus the level of aggregate demand falls, and the resulting surpluses would drive down the general price level, hence curbing demand-pull inflation.

If an open economy is the result of constraints faced by the country for instance, its small domestic market and the lack of availability of resources, then contractionary monetary policy centred on interest rates may not be effective for such a small and therefore open economy, as in the case of Singapore. Singapore is unable to control interest rate through money supply, and is unable to control both interest rate and exchange rate at the same time. Being small and therefore open, Singapore is dependent on and experiences free financial capital mobility in and out of Singapore. There is essentially lack of control over the domestic money supply and hence supply of loanable funds due to large inflow and outflow of international flows of money. Any decrease in interest rate through an increase in domestic money supply will trigger an outflow of international money supply as financial assets in Singapore yield less interest earnings for speculators. Hence, the outflow of international money supply will negate any original increase in domestic money supply, rendering interest rate-centred monetary policy ineffective. Additionally any change in interest rates may have minimal impact on FDI since foreign investors are usually interest insensitive because their decision to invest in a foreign country is based on reasons other factors such as expectations of economic growth and profitability, other than such interest rates change.

Hence the choice of monetary policy tool is influenced by the extent to which an economy is open. Given the small and therefore open nature of the Singapore economy, to manage rising price pressures so as to attain price stability, it would be more strategic for governments to use exchange rate as a monetary policy tool as opposed to the interest rate-centred monetary policy employed in large and less open economies.

*[Note: this idea of limiting the effectiveness of the use of interest-rate centred MP can also be considered as an anti-thesis point, if students argue that besides the characteristics of open economy, another characteristic i.e. size of economy also influence choice of govt policy]*

**<u>Anti-thesis – Other factors (other than openness of economy) that affect Spore govt policy decision to achieve low and stable inflation</u>**

(3) **Other Causes of inflation besides External Factors** (**Supply-side Policy)**
If the cause of inflation stems from domestic sources such as rising wages as a result of a tight labour market and falling labour productivity of the workers, this translates into an increase in costs of production for firms. As costs of production rises, the SRAS would fall as firms would not be able to produce as much output as previously. This would bring about an increase in general price level and a fall in real national income, leading to cost-push inflation. Hence, to tackle such cost-push inflation, ‘openness’ of an economy is a less significant factor to influence government’s policy decision to attain price stability. In this case, the government would implement policies that can increase the labour productivity of its workforce.

Assuming the government has strong fiscal budget position, it can implement supply-side policies by spending on Improving Human Capital. This could involve providing subsidies to improve education and training so as to raise workers’ productivity as well as increase their job flexibility and mobility. Government can provide educational facilities to increase accessibility to education. This ensures that sufficient training is provided and there is sufficient supply of skilled labour. For example, with the SkillsFuture initiative, the Singapore government helps workers to learn new skills which raise the average quality of the labour force. This increase in productive capacity shifts the AS curve to the right from AS0 to AS1, reducing general price level from P0 to P1, hence mitigating the cost push inflation.

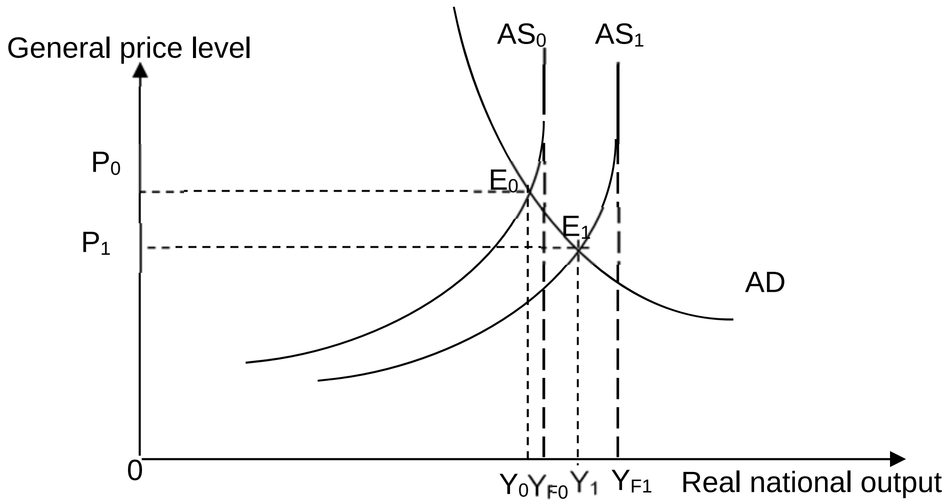


**Figure 3: Effects of Supply-side Policies**

Moreover, better trained workers can also help to develop and produce higher quality products, increasing demand and revenue. Hence, such initiatives have the unintended consequences of helping to create productive employment opportunities. From the diagram above, the increase in real national output from $Y_0$ to $Y_1$ would lead to a rise in the derived demand for labour. Hence, unemployment falls. This can help improve the income of lower income families, and hence narrow the income inequality which is a growing concern in Singapore.

(*Note to Markers: Although SS-side policies are preferred since NY can still grow while reducing GPL, the use of contractionary FP is also possible. Hence, the other consideration will be the govt's ability to reduce G esp on infrastructural projects and public and merit goods which are likely urgent. However, if student talks about the size of k which depends on MPS, MPT and MPM, it is not as relevant since size of k will impact the extent of NY fall, rather than the extent of GPL fall.* )

**(4) Possibility of High Opportunity Cost Incurred**

While supply-side policy policies is useful to curb cost-push inflation caused by domestic factors, the government would also need to consider the possibility of budget constraint faced when adopting supply-side policy to achieve price stability. The cost of providing or subsidising training can impose a burden on the government budget, as it requires huge sums of funding. This can reduce budget surplus, or increase budget deficit depending on the government's budget position. There is also opportunity cost associated with funding training and education, which is money which could be spent on other social sectors such as healthcare and/or on infrastructure, hence sacrificing government spending in other areas that could help improve the country's standard of living.

As such, faced with potentially high opportunity costs of a policy, policy makers will then have to make a judgement on whether these costs (including opportunity cost) can be managed, and if not, the possibilities of adopting other policies to attain price stability instead. Hence in this case, especially for countries facing a lack of budget reserves, policy makers would consider beyond openness of economy to decide on choice of policy to manage rising price pressures.

### (5) Potential Conflict in Policy Objectives

For an open economy such as Singapore, although a strong Singapore dollar may be effective in maintaining a low rate of inflation, yet we have to be aware that the appreciation of currency comes at the costs of eroding our export competitiveness. The stronger Sing dollar would unfortunately cause the prices of exports in foreign currency terms to become more expensive. Since demand for exports tend to be price elastic due the presence of diverse substitutes, the rise in prices of Singapore's exports would lead to a more than proportionate decrease in quantity of exports demanded, undermining our export revenue. This would result in a worsening of current account and therefore balance of payment, and more importantly, an undesired contractionary effect on on real national output and hence, economic growth and employment of the economy as next exports falls. Thus in the short run, the government may face with the problem of achieving lower inflation at the expense of increased unemployment and unfavourable balance of payments position. Hence to manage rising price pressure and attain price stability, the government might need to implement complementary policies to mitigate the potential conflicts with other macroeconomic objectives that could arise from an appreciating exchange rate.

## (III) Evaluation

Openness of an economy could, to a large extent, influence a government's policy decisions to manage rising price pressures so as to attain price stability. Appreciating exchange rate, despite its limitations has been a major and effective policy in curbing imported inflation in a very open economy such as Singapore.

Although it is an important consideration, there are other factors that the government needs to take into consideration for sound policy decisions. Of particular importance would be the root cause of rising price pressures. This is particularly applicable for a very open economy such as Singapore where the nature of inflation has morphed over the years with internal factors becoming increasingly significant contributors, given an increasingly ageing population and the situation made worse off as in 2011, the government introduced policies to further restrict the foreign labour inflow into its shore. Exchange rate policy should be used together with policies like supply side policies to improve labour productivity and export competitiveness so as to manage rising price pressures in the economy. Additionally regardless of the degree of openness of an economy, there are often multiple sources of inflation and thus governments should employ a mix of policies that are appropriate to the respective sources of inflation, in order to solve the problem effectively and at the same time minimise any other undesirable conflicts in policy objectives that may come along.

All these factors are important for government's consideration in their policy decisions to manage rising price pressure, and policy decisions are not made based only on a single factor i.e. openness of an economy.

| Level | Knowledge, Application / Understanding and Analysis | Marks |
|---|---|---|
| **L3** | For an answer that has depth to the explanation for the choice of policy decision to manage rising price pressures. A good explanation of at least 2 policy decisions, one that is based on openness of economy and another on 2 other factors that could influence policy decisions plus a descriptive explanation of a third policy decision. | 8-10 |
| **L2** | For an answer giving largely descriptive explanation of the policy decisions and the reasons for their choice or a largely descriptive explanation that is skewed towards either the thesis or anti-thesis of the question | 5-7 |
| **L1** | For an answer that shows knowledge of the policy decisions and/or unexplained reasons for their choice. | 1-4 |

| | | |
|---|---|---|
| **E3** | For an answer that arrives at an analytically well-reasoned judgement on the relative importance of the openness of an economy and other factors in influencing choice of policies to manage rising price pressures | 4-5 |
| **E2** | For an answer that makes some attempt at a judgement that is elaborated with relevance to the question | 2-3 |
| **E1** | For an answer that gives an unsupported evaluative stance which attempts to respond to the question | 1 |